

WHAT IS CLAIMED IS:

1. A method for producing a nonwoven fiber composite for the manufacture of filters in the tobacco industry, the method comprising:  
feeding separated fiber materials to a fluidized bed;  
transporting the separated filter material inside the fluidized bed to a rod-forming device essentially by a transport air flow flowing in the direction of the rod-forming device; and  
compiling the filter material on the rod-forming device.
2. The method according to claim 1, wherein the filter material comprises fibers.
3. The method according to claim 3, further comprising providing fibers of different compositions.
4. The method according to claim 1, wherein the fibers in the fluidized bed further comprises at least one additive.
5. The method according to claim 1, wherein the separated fibers have a length of from about 2 to about 100mm.
6. The method according to claim 1, wherein the average fiber diameter of the separated fibers is in the range of from about 10 to about 40 $\mu$ m.

7. The method according to claim 1, wherein the average fiber diameter of the separated fibers is in the range of from about 20 to about 38 $\mu$ m.
8. The method according to claim 1, wherein the separated fibers are synthetic fibers.
9. The method according to claim 8, wherein the fiber strength of the synthetic fibers is from about 1 to about 20 dtex.
10. The method according to claim 8, wherein the fiber strength of the synthetic fibers is from about 2 to about 6 dtex.
11. The method according to claim 1, further comprising successively feeding separated fiber materials of differing composition to the fluidized bed.
12. The method according to claim 1, wherein the feeding step further comprises the separating of fibers.
13. The method according to claim 1, wherein the method further comprises forming a continuous fiber filter rod from the compiled fibers, and dividing the continuous rod into individual filter sections.

14. An arrangement of a continuous rod machine for use in the tobacco industry, comprising:  
at least one filter-material feeding device comprising a metering element for dispensing metered amounts of separated filter material;  
a continuous-rod forming device; and  
a fluidized bed for transporting the filter material from the filter material feeding device to the continuous rod-forming device.
15. The continuous rod machine arrangement according to claim 14, wherein the filter material feeding device further comprises at least one conveying element.
16. The continuous rod machine arrangement according to claim 14, wherein the at least one conveying element comprises at least one roller.
17. The continuous rod machine arrangement according to claim 14, wherein the filter material feeding device supplies the separated fibers to the metering element.
18. The continuous rod machine arrangement according to claim 14, wherein the fluidized bed comprises a filter material directing channel.
19. The continuous rod machine arrangement according to claim 14, wherein the fluidized bed is a filter material directing channel.

20. The continuous rod machine arrangement according to claim 14, wherein the fluidized bed comprises a curved portion, initially transporting the fluidized filter material in a downward direction then transitioning to a horizontal position before subsequently directing the fluidized filter material in an upward direction.
21. The continuous rod machine arrangement according to claim 20, wherein the curve comprises an elliptical shape increasing in radius in the transporting direction.
22. The continuous rod machine arrangement according to claim 14, wherein the filter material feeding device further comprises a filter material separating device.
23. The continuous rod machine arrangement according to claim 22, wherein the filter feeding device separating device comprises a fiber crusher.
24. The continuous rod machine arrangement according to claim 23, wherein the fiber crusher comprises an element selected from the group consisting of at least one cutting drum and at least one hammer crusher and combinations thereof.
25. The continuous rod machine arrangement according to claims 22, wherein the filter material feeding device meters the filter material to the separating device.

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26. The continuous rod machine arrangement according to claim 14, wherein the arrangement further comprises at least two filter material feeding devices.